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FERTILIZER REPORT

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FOR THE YEAR
1949

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Bureau of Foods and Chemistry

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Fertilizer Report—1949

Introduction

All products intended for fertilizing purposes, except the dung of domestic animals, marl, lime, and wood ashes, shall be registered annually in accordance with the provisions of the Pennsylvania Fertilizer Law, Act of May 1, 1909, as amended.

Section 1 requires the following information to be shown on sacks or attached cards: (a) The number of pounds of fertilizer contained in the package; (b) the name, brand, or trade mark under which the fertilizer is sold; (c) the name and principal address of the manufacturer, importer, or other person putting the fertilizer on the market in this Commonwealth; (d) guarantee for nitrogen; (e) guarantee for total phosphoric acid, except in mixed or super-phosphate fertilizer; (f) guarantee for available phosphoric acid; (g) guarantee for potash soluble in distilled water.

Mixed fertilizer shall contain at least sixteen units of plant food based upon guarantees for nitrogen, available phosphoric acid, and water soluble potash, the guarantees to be stated in even units.

The Law requires that when the word "tobacco" is used as a part of the brand name, the potash content must be in a form other than chloride.

Applications for registration are submitted to each previous licensee toward the close of the calendar year. The application must show the preceding year's tonnage sales of each brand in order that license or registration fee can be properly computed. It must also show the names and number of brands to be sold during the ensuing year, and state the analysis of each one of such brands.

Agents of the Bureau of Foods and Chemistry are empowered to collect samples of commercial fertilizers, at which time reports providing full information for each sample are prepared. The samples and reports are forwarded direct to the Harrisburg Laboratory where an immediate check of the record is effected to determine the registration status. Analyses are then performed to ascertain whether the fertilizers conform to their guarantees.

During the year 1949, Agents of the Department collected 443 official samples. Of this number, a total of 438, representing 146 brands registered by 36 manufacturers, were subjected to analysis and classified as follows:

	<i>Brands</i>	<i>Samples</i>
Complete Fertilizers	82	338
Ground Bone Fertilizers	4	4
Superphosphate Fertilizers	30	56
Rock and Potash Fertilizers	26	35
Miscellaneous Fertilizers	4	5
Totals	<hr/> 146	<hr/> 438

Requirements for Registration According to Pennsylvania FERTILIZER LAW

Section 2. Each manufacturer or importer of commercial fertilizer . . . shall, on or before the first day of January of each year, or before offering them for sale in this Commonwealth, file annually with the Secretary of Agriculture a statement of the names and number of brands of such commercial fertilizers, having distinct trade-names, that he shall offer for sale during the next ensuing year, and a copy of the analysis of each one of such brands of commercial fertilizer . . .

Section 3. In addition . . . every manufacturer or importer of commercial fertilizers shall, on or before the first day of January of each year, or before offering them for sale in this Commonwealth, file annually with the Secretary of Agriculture an affidavit showing the amount of each brand of fertilizer, having a distinct trade-name, sold within the Commonwealth during the last preceding year; and if the said amount shall be one hundred and fifty tons or less, he or they shall pay or cause to be paid to the Secretary of Agriculture the sum of fifteen dollars for each and every brand of such commercial fertilizer, having a distinct trade-name, sold within the State during the last preceding year; and if the said amount shall exceed one hundred and fifty tons, and be not more than two hundred and fifty tons, he or they shall pay the sum of twenty dollars, as aforesaid; if the said amount shall exceed two hundred and fifty tons, and not more than four hundred tons, he or they shall pay the sum of thirty dollars; if the amount shall exceed four hundred tons, and not more than five hundred tons, he or they shall pay forty dollars; and if the amount shall exceed five hundred tons, he or they shall pay fifty dollars. If such manufacturer or manufacturers, importer or importers, shall not have made any sales within the Commonwealth during the preceding year, he or they shall pay the sum of fifteen dollars upon each such brand as aforesaid.

Section 5. Any person or persons selling, offering, or exposing for sale, any commercial fertilizer or any brand of the same, having a distinct trade-name, without the analysis required by section one of this act, or with an analysis stating that it contains a larger percentage of any one or more of the above-named constituents than is contained therein, or for the sale of which all the provisions of sections two and three have not been complied with, or any person violating any of the provisions of section four of this act, shall be guilty of a misdemeanor, and, on conviction, shall be sentenced to pay a fine of not less than twenty-five nor more than one hundred dollars for the first offense, and not less than two hundred dollars for each subsequent offense. . . .—*Act of May 1, 1909, P. L. 344 as amended.*

The Department of Agriculture, as the agency charged by the Legislature with enforcement of the provisions of the Fertilizer Law (copies of which are available upon request) insists upon strict compliance therewith.

Brands Registered and Tonnage Sales

Licenses were issued to 107 Manufacturers to cover sales of their brands for the year 1949. These licenses included 670 brands of which 556 were mixed fertilizers and 114 so-called "base" materials such as nitrate of soda, sulphate of ammonia, bone, etc.

The 1949 applications for registration showed that 563,939 tons of all classes of fertilizers were sold during the year 1948 compared with 547,381 tons sold during 1947 and classified as follows: Complete Fertilizers, 459,081 tons; Ground Bone Fertilizers, 1031 tons; Superphosphate Fertilizers, 73,387 tons; Rock and Potash Fertilizers, 19,814 tons; and Miscellaneous Fertilizers as follows: Tankage, 958 tons; Nitrate of Soda, 527 tons; Potash Salts, 54 tons; Sulphate of Ammonia, 270 tons; and unclassified, 8,261 tons.

The 1948 tonnage figure reveals that there were supplied 16,852 tons of nitrogen, 52,201 tons of available phosphoric acid, and 31,335 tons of water soluble potash, or a total of 100,388 tons of plant food. The amount of plant food is 64,230 tons less than that supplied during the year 1947.

Conclusions

Of the 438 official samples analyzed, 84 or 19.18 per cent were found to be deficient in one or more elements of plant food, to the extent of 0.2 per cent or more. The proportion of deficiencies is higher than that reported for the year 1948.

Considering the plant food elements separately, 27 samples or 6.16 per cent were found to be deficient in nitrogen; 15 or 3.42 per cent deficient in phosphoric acid; and 42 or 9.59 per cent deficient in water soluble potash.

Of the total number of fertilizers analyzed, 338 were complete fertilizers and 76 or 22.48 per cent were found to be deficient: 27 or 7.99 per cent deficient in nitrogen; 14 or 4.14 per cent in available phosphoric acid; 35 or 10.36 per cent in water soluble potash.

Average Analyses and Retail Prices

The average unit values, estimated from the average retail selling prices, were as follows: Nitrogen \$3.68, Available Phosphoric Acid \$1.48, Water Soluble Potash \$1.87.

The average retail selling price for Complete Fertilizers in 1949 was \$48.36 a ton, compared with \$46.31 for 1948.

It is noted that 19.18 per cent of all samples collected during the year 1949 were found to be deficient, which deficiency is higher than the previous year's inspection. In most instances the deficiencies were balanced by over-ages in other elements. Where the deficiencies were found to be of serious nature, prosecutions were instituted.

Key to Tables

The following tables include the results of analyses of the official samples. Each sample was given a chemist's number and analyzed for the element or elements guaranteed.

The Asterisk (*) indicates those samples found to be deficient to the extent of 0.2 per cent or more.

Table I—Deficiencies.

Table II—Average Analyses and Retail Prices.

Table III—Complete Fertilizer, furnishing Nitrogen, Available Phosphoric Acid and Potash.

Table IV—Ground Bone Fertilizers, furnishing Nitrogen, and Total Phosphoric Acid.

Table V—Superphosphate and Lime Phosphate Fertilizers furnishing Available Phosphoric Acid.

Table VI—Rock and Potash Fertilizers furnishing Available Phosphoric Acid and Potash.

Table VII—Miscellaneous Fertilizers, including Nitrate of Soda and Sulphate of Ammonia.

TABLE I. DEFICIENCIES

CLASS OF FERTILIZERS	SAMPLES	NITROGEN	Number Deficient in	
			AVAILABLE PHOSPHORIC ACID	POTASH
Complete Fertilizers	338	27	14	35
Ground Bone Fertilizers	4	0	0	0
Superphosphate Fertilizers	56	0	0	0
Rock and Potash Fertilizers	35	0	1	7
Miscellaneous	5	0	0	0
Total	438	27	15	42

TABLE II. AVERAGE ANALYSES AND RETAIL PRICES

FORM OF PLANT FOOD	COMPLETE FERTILIZERS	GROUND BONE FERTILIZERS	SUPER-PHOSPHATE FERTILIZERS*	ROCK AND POTASH FERTILIZERS	MISCELLANEOUS
	Per Cent	Per Cent	Per Cent	Per Cent	Per Cent
Nitrogen	4.50	3.55	....	....	14.69
Available Phosphoric Acid	11.79	20.85	20.76	15.22	2.04
Potash	7.67	....	....	9.52	....
Selling Price 1949	\$48.36	\$87.92	\$30.87	\$40.41	\$77.04
Selling Price 1948	\$46.31	....	\$31.06	\$37.80	\$63.39

* Excluding Lime Phosphate

TABLE III. ANALYSES OF COMPLETE FERTILIZERS—FURNISHING NITROGEN, PHOSPHORIC ACID AND POTASH

MANUFACTURER AND BRAND NAME			NITROGEN		AVAILABLE PHOSPHORIC ACID		POTASH		
			Found	Guar.	Found	Guar.	Found	Guar.	As Muirate
THE AMERICAN AGRICULTURAL CHEMICAL CO. New York, N. Y.			P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
AA Quality Fertilizer	2-12-6 (103)		2.05	2.00	12.38	12.00	6.09	6.00	----
AA Quality Fertilizer	3-12-6 (300)		3.09	3.00	12.88	12.00	6.34	6.00	----
AA Quality Fertilizer	3-12-6 (324)		3.31	3.00	13.60	12.00	6.51	6.00	----
AA Quality Fertilizer	3-12-6 (357)		3.17	3.00	12.70	12.00	6.61	6.00	----
AA Quality Fertilizer	4-12-4 (98)		3.86	4.00	12.78	12.00	4.62	4.00	----
AA Quality Fertilizer	5-10-5 (318)		5.11	5.00	10.48	10.00	5.45	5.00	----
AA Quality Fertilizer	5-10-5 (358)		5.25	5.00	10.48	10.00	5.49	5.00	----
Agrico Country Club	6-10-4 (1)		6.08	6.00	10.74	10.00	4.40	4.00	----
Agrico for Corn	3-12-6 (102)		2.95	3.00	12.22	12.00	5.33	6.00	----
Agrico for Corn	3-12-6 (194)		2.92	3.00	12.60	12.00	6.38	6.00	----
Agrico for Corn	3-12-6 (279)		3.08	3.00	12.12	12.00	6.32	6.00	----
Agrico for Corn	3-12-6 (440)		*2.61	3.00	12.16	12.00	6.71	6.00	----
Agrico for Gardens	5-10-5 (5)		4.83	5.00	10.28	10.00	5.54	5.00	----
Agrico for Gardens	5-10-5 (193)		4.82	5.00	10.64	10.00	5.38	5.00	----
Agrico for Gardens	5-10-5 (426)		5.17	5.00	11.16	10.00	5.14	5.00	----
Agrico for Gardens	5-10-5 (438)		5.05	5.00	10.63	10.00	5.75	5.00	----
Agrico for Grain	2-12-6 (178)		2.09	2.00	12.58	12.00	6.53	6.00	----
Agrico for Grain	2-12-6 (196)		2.17	2.00	12.18	12.00	6.33	6.00	----
Agrico for Grain	2-12-6 (242)		2.12	2.00	13.10	12.00	6.53	6.00	----
Agrico for Grain	3-12-6 (3)		2.86	3.00	12.98	12.00	6.23	6.00	----
Agrico for Lawns, Trees & Shrubs	6-10-4 (101)		6.38	6.00	10.98	10.00	4.30	4.00	----
Agrico for Lawns, Trees & Shrubs	6-10-4 (437)		6.26	6.00	11.06	10.00	4.31	4.00	----
Agrico for Potatoes	4-12-8 (278)		4.17	4.00	12.26	12.00	8.41	8.00	----
Agrico for Potatoes	4-12-8 (317)		4.05	4.00	12.94	12.00	8.64	8.00	----
Agrico for Potatoes	4-12-12 (100)		4.23	4.00	12.10	12.00	13.85	12.00	----
Agrico for Potatoes	4-12-12 (195)		3.95	4.00	12.10	12.00	12.56	12.00	----
Agrico for Potatoes	4-12-12 (439)		4.07	4.00	12.14	12.00	12.41	12.00	----
Agrico for Truck	5-10-5 (179)		*4.46	5.00	11.50	10.00	4.81	5.00	----
Agrico for Truck	5-10-10 (255)		5.14	5.00	10.64	10.00	11.41	10.00	----
Agrico for Truck	5-10-10 (260)		5.00	5.00	10.52	10.00	10.32	10.00	----
Agrico for Truck	5-10-10 (382)		5.16	5.00	11.52	10.00	10.56	10.00	----
ARMOUR FERTILIZER WORKS Baltimore, Maryland									
Armour's Big Crop	3-12-6 (108)		3.17	3.00	12.74	12.00	6.21	6.00	----
Armour's Big Crop	3-12-6 (152)		3.69	3.00	12.66	12.00	6.76	6.00	----
Armour's Big Crop	3-12-6 (192)		3.33	3.00	12.70	12.00	6.68	6.00	----
Armour's Big Crop	3-12-6 (201)		3.20	3.00	12.18	12.00	6.51	6.00	----
Armour's Big Crop	3-12-6 (237)		3.21	3.00	13.14	12.00	6.35	6.00	----
Armour's Big Crop	3-12-6 (305)		3.68	3.00	12.92	12.00	7.22	6.00	----
Armour's Big Crop	4-12-4 (104)		4.09	4.00	12.58	12.00	6.02	6.00	----
Armour's Big Crop	4-12-4 (191)		4.08	4.00	12.34	12.00	4.69	4.00	----
Armour's Big Crop	4-12-4 (232)		4.18	4.00	12.26	12.00	4.51	4.00	----
Armour's Big Crop	4-12-4 (267)		*3.68	4.00	12.42	12.00	5.04	4.00	----
Armour's Big Crop	4-12-8 (36)		4.17	4.00	13.02	12.00	4.96	4.00	----
Armour's Big Crop	4-12-8 (105)		4.23	4.00	11.86	12.00	9.38	8.00	----
Armour's Big Crop	4-12-8 (233)		4.06	4.00	12.88	12.00	8.62	8.00	----
Armour's Big Crop	4-12-8 (270)		4.90	4.00	12.82	12.00	8.34	8.00	----
Armour's Big Crop	4-12-8 (387)		3.84	4.00	12.12	12.00	8.91	8.00	----
Armour's Big Crop	4-12-12 (230)		4.05	4.00	12.84	12.00	8.83	8.00	----
Armour's Big Crop	4-12-12 (389)		4.18	4.00	12.28	12.00	*10.91	12.00	----
Armour's Big Crop	5-10-5 (203)		4.81	5.00	11.64	10.00	13.08	12.00	----
Armour's Big Crop	5-10-5 (235)		4.86	5.00	11.06	10.00	5.01	5.00	----
Armour's Big Crop	5-10-5 (269)		4.85	5.00	11.20	10.00	5.12	5.00	----
Armour's Big Crop	5-10-5 (332)		5.71	5.00	11.46	10.00	9.63	5.00	----
Armour's Big Crop	5-10-5 (354)		4.80	5.00	10.24	10.00	*4.60	5.00	----
Armour's Big Crop	5-10-10 (107)		4.93	5.00	10.62	10.00	5.72	5.00	----
Armour's Big Crop	5-10-10 (150)		5.03	5.00	10.54	10.00	10.35	10.00	----
Armour's Big Crop	5-10-10 (234)		4.93	5.00	11.38	10.00	10.27	10.00	----
Armour's Big Crop	5-10-10 (259)		5.10	5.00	10.98	10.00	10.29	10.00	----
Armour's Big Crop	5-10-10 (306)		5.06	5.00	11.60	10.00	10.56	10.00	----
Armour's Big Crop	5-10-10 (351)		5.13	5.00	10.32	10.00	10.03	10.00	----
Armour's Big Crop	5-10-10 (386)		*4.45	5.00	11.42	10.00	10.95	10.00	----
Armour's Big Crop	7-7-7 (388)		7.23	7.00	7.06	7.00	9.85	10.00	----
Armour's Big Crop	8-16-16 (33)		*7.45	8.00	17.92	16.00	7.28	7.00	----
Armour's Special Top Dresser	10-6-4 (202)		9.82	10.00	7.32	6.00	*13.80	16.00	----
Armour's Velvetgreen	5-10-5 (268)		5.20	5.00	11.34	10.00	4.30	4.00	----
BAUGH & SONS CO. Philadelphia, Pa.									
Baugh's	5-10-10 (30)		5.17	5.00	10.72	10.00	10.16	10.00	----
Baugh's	5-10-10 (391)		5.13	5.00	11.18	10.00	10.53	10.00	----
Baugh's	5-10-10 (396)		5.43	5.00	10.56	10.00	11.13	10.00	----
Baugh's Balanced Plant Food	4-12-4 (173)		4.17	4.00	12.04	12.00	4.20	4.00	----
Baugh's Balanced Plant Food	4-12-4 (320)		4.51	4.00	12.54	12.00	4.60	4.00	----
Baugh's Century Plant Food	4-12-8 (24)		4.43	4.00	12.52	12.00	8.70	8.00	----
Baugh's Century Plant Food	4-12-8 (392)		4.21	4.00	12.74	12.00	8.73	8.00	----
Baugh's Double Eagle Phosphate	3-12-6 (28)		3.59	3.00	12.76	12.00	6.94	6.00	----
Baugh's Double Eagle Phosphate	3-12-6 (172)		3.13	3.00	11.94	12.00	6.72	6.00	----
Baugh's Double Eagle Phosphate	3-12-6 (394)		3.23	3.00	12.54	12.00	6.61	6.00	----

* Deficient

TABLE III. ANALYSES OF COMPLETE FERTILIZERS—FURNISHING NITROGEN, PHOSPHORIC ACID AND POTASH

MANUFACTURER AND BRAND NAME			NITROGEN		AVAILABLE PHOSPHORIC ACID		POTASH		
			Found	Guar.	Found	Guar.	Found	Guar.	As Muirate
			P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
Baugh's Premium Plant Food & Soil Builder	3-12-6 (32)		3.21	3.00	12.48	12.00	6.47	6.00	----
Baugh's Premium Plant Food & Soil Builder	3-12-6 (163)		3.25	3.00	12.90	12.00	5.96	6.00	----
Baugh's Premium Plant Food & Soil Builder	3-12-6 (174)		3.34	3.00	12.74	12.00	6.52	6.00	----
Baugh's Premium Plant Food & Soil Builder	3-12-6 (277)		3.26	3.00	12.64	12.00	6.55	6.00	----
Baugh's Premium Plant Food & Soil Builder	3-12-6 (321)		3.69	3.00	13.98	12.00	6.61	6.00	----
Baugh's Premium Plant Food & Soil Builder	3-12-6 (336)		3.28	3.00	13.74	12.00	6.45	6.00	----
Baugh's Premium Plant Food & Soil Builder	3-12-6 (393)		3.27	3.00	13.92	12.00	6.32	6.00	----
Baugh's Premium Plant Food & Soil Builder	4-8-12 (77)		4.01	4.00	9.10	8.00	*11.34	12.00	----
Baugh's Premium Plant Food & Soil Builder	4-12-4 (29)		4.02	4.00	12.66	12.00	4.98	4.00	----
Baugh's Premium Plant Food & Soil Builder	4-12-12 (25)		4.03	4.00	12.76	12.00	12.09	12.00	----
Baugh's Premium Plant Food & Soil Builder	4-12-12 (390)		4.06	4.00	12.62	12.00	12.59	12.00	----
Baugh's Premium Plant Food & Soil Builder	5-10-5 (27)		5.16	5.00	10.44	10.00	5.48	5.00	----
Baugh's Premium Plant Food & Soil Builder	5-10-5 (60)		5.24	5.00	11.00	10.00	5.78	5.00	----
Baugh's Premium Plant Food & Soil Builder	5-10-5 (78)		5.09	5.00	11.42	10.00	5.31	5.00	----
Baugh's Premium Plant Food & Soil Builder	5-10-5 (228)		4.90	5.00	11.56	10.00	8.16	5.00	----
Baugh's Premium Plant Food & Soil Builder	5-10-5 (319)		5.30	5.00	11.18	10.00	5.77	5.00	----
Baugh's Premium Plant Food & Soil Builder	5-10-10 (26)		5.24	5.00	10.46	10.00	10.50	10.00	----
Baugh's Premium Plant Food & Soil Builder	5-10-10 (61)		5.11	5.00	11.24	10.00	10.60	10.00	----
Baugh's Premium Plant Food & Soil Builder	5-10-10 (227)		5.01	5.00	11.50	10.00	9.81	10.00	----
Baugh's Premium Plant Food & Soil Builder	5-10-10 (276)		6.08	5.00	10.72	10.00	10.50	10.00	----
Baugh's Premium Plant Food & Soil Builder	5-10-10 (395)		5.22	5.00	11.04	10.00	10.40	10.00	----
Baugh's Premium Plant Food & Soil Builder	7-7-7 (31)		7.13	7.00	7.98	7.00	8.18	7.00	----
Baugh's Premium Plant Food & Soil Builder	7-7-7 (79)		7.23	7.00	7.58	7.00	7.48	7.00	----
Baugh's Premium Plant Food & Soil Builder	7-7-7 (164)		7.15	7.00	8.18	7.00	6.99	7.00	----
CARLISLE FERTILIZER WORKS, INC. Carlisle, Pa.									
Carlisle	3-12-6 (348)		3.54	3.00	13.20	12.00	8.53	6.00	----
Carlisle	5-10-10 (347)		5.12	5.00	11.38	10.00	11.00	10.00	----
CENTRAL CHEMICAL CORPORATION Hagerstown, Md.									
Farmrite Famous Corn Food	3-12-6 (85)		3.01	3.00	12.14	12.00	6.01	6.00	----
Farmrite Famous Fruit Food	10-6-4 (175)		*9.30	10.00	6.56	6.00	4.11	4.00	----
Farmrite Famous Fruit Food	10-6-4 (407)		*9.68	10.00	6.48	6.00	4.06	4.00	----
Farmrite Golden Grain	3-12-6 (11)		3.14	3.00	12.68	12.00	6.51	6.00	----
Farmrite Golden Grain	3-12-6 (42)		3.03	3.00	12.88	12.00	6.67	6.00	----
Farmrite Golden Grain	3-12-6 (265)		3.19	3.00	*11.06	12.00	6.45	6.00	----
Farmrite Golden Grain	3-12-6 (373)		3.08	3.00	12.08	12.00	5.99	6.00	----
Farmrite Golden Grain	3-12-6 (402)		3.01	3.00	12.02	12.00	6.16	6.00	----
Farmrite Golden Grain	3-12-6 (427)		3.13	3.00	*11.64	12.00	6.88	6.00	----
Farmrite Golden Grain	3-12-6 (434)		3.05	3.00	11.82	12.00	6.43	6.00	----
Farmrite Famous Old Fish Brand	3-12-6 (176)		3.09	3.00	12.16	12.00	5.95	6.00	----
Farmrite Famous Old Fish Brand	3-12-6 (433)		3.10	3.00	11.92	12.00	6.71	6.00	----
Farmrite Famous Potato Food	4-12-12 (43)		4.24	4.00	12.40	12.00	11.89	12.00	----
Farmrite Famous Potato Food	5-10-10 (41)		5.08	5.00	10.50	10.00	10.16	10.00	----
Farmrite Farmers Favorite	4-12-4 (10)		4.20	4.00	12.54	12.00	4.26	4.00	----
Farmrite Farmers Favorite	4-12-4 (86)		4.00	4.00	11.97	12.00	4.01	4.00	----
Farmrite Farmers Favorite	4-12-4 (263)		3.82	4.00	13.32	12.00	4.59	4.00	----
Farmrite Farmers Favorite	4-12-4 (403)		4.09	4.00	12.92	12.00	3.98	4.00	----
Farmrite Fertilizer	4-12-8 (405)		4.25	4.00	12.28	12.00	9.10	8.00	----
Farmrite Fertilizer	4-12-12 (376)		4.00	4.00	12.96	12.00	*11.40	12.00	----
Farmrite Fertilizer	4-12-12 (406)		4.26	4.00	*11.64	12.00	12.91	12.00	----
Farmrite Fertilizer	5-10-10 (374)		*4.61	5.00	10.34	10.00	10.55	10.00	----
Farmrite Fertilizer	5-10-10 (404)		5.09	5.00	10.32	10.00	10.13	10.00	----
Farmrite Fertilizer	8-16-16 (409)		8.23	8.00	15.80	16.00	16.38	16.00	----
Farmrite Fertilizer	10-10-10 (264)		10.25	10.00	*9.20	10.00	12.95	10.00	----
Farmrite Fertilizer	10-10-10 (432)		*6.10	10.00	12.34	10.00	*6.32	10.00	----
Farmrite Truck Special	5-10-5 (375)		4.92	5.00	10.88	10.00	5.15	5.00	----
Farmrite Truck Special	5-10-5 (428)		5.05	5.00	9.98	10.00	4.93	5.00	----

* Deficient

TABLE III. ANALYSES OF COMPLETE FERTILIZERS—FURNISHING NITROGEN, PHOSPHORIC ACID AND POTASH

MANUFACTURER AND BRAND NAME		NITROGEN		AVAILABLE PHOSPHORIC ACID		POTASH		
		Found	Guar.	Found	Guar.	Found	Guar.	As Muirate
		P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
COOPERATIVE G.L.F. SOIL BUILDING SERVICE, INC. Ithaca, New York								
G.L.F. Quelity Open Formula	3-12-6 (250)	3.02	3.00	12.62	12.00	6.72	6.00	----
G.L.F. Quality Open Formule	3-12-6 (322)	4.01	3.00	12.68	12.00	7.44	6.00	----
G.L.F. Quelity Open Formule	3-12-6 (361)	3.17	3.00	12.26	12.00	7.02	6.00	----
G.L.F. Quality Open Formula	4-12-4 (323)	4.01	4.00	12.58	12.00	5.27	4.00	----
G.L.F. Quelity Open Formule	4-12-12 (364)	4.30	4.00	12.20	12.00	13.36	12.00	----
G.L.F. Quality Open Formule	5-10-5 (252)	5.15	5.00	10.34	10.00	6.04	5.00	----
G.L.F. Quelity Open Formule	5-10-5 (326)	5.57	5.00	11.18	10.00	6.21	5.00	----
G.L.F. Quality Open Formula	5-10-10 (225)	5.41	5.00	10.68	10.00	10.31	10.00	----
G.L.F. Quelity Open Formule	5-10-10 (251)	5.36	5.00	10.72	10.00	11.21	10.00	----
G.L.F. Quality Open Formule	5-10-10 (314)	5.29	5.00	10.78	10.00	10.48	10.00	----
G.L.F. Quelity Open Formule	5-10-10 (360)	5.28	5.00	11.36	10.00	10.66	10.00	----
G.L.F. Quality Open Formule	6-12-6 (315)	6.15	6.00	12.88	12.00	6.71	6.00	----
G.L.F. Quelity Open Formule	6-12-6 (425)	6.01	6.00	12.82	12.00	7.12	6.00	----
G.L.F. Quality Open Formule	6-18-6 (363)	6.00	6.00	18.96	18.00	6.11	6.00	----
CUMBERLAND VALLEY COOPERATIVE ASSN. Shippensburg, Pe.								
Old Reliable	3-12-6 (283)	*2.45	3.00	13.64	12.00	*5.67	6.00	----
Old Reliable	3-12-6 (340)	*2.08	3.00	13.54	12.00	6.59	6.00	----
Old Reliable	5-10-10 (284)	*4.04	5.00	11.46	12.00	*9.46	10.00	----
THE DAVIDSON CHEMICAL CORPORATION Baltimore, Md.								
Devco Granulated	2-12-12 (153)	2.04	2.00	13.36	12.00	14.66	12.00	----
Devco Granulated	3-12-6 (80)	3.42	3.00	12.30	12.00	*5.58	6.00	----
Devco Granulated	3-12-6 (222)	3.06	3.00	12.24	12.00	*5.00	6.00	----
Devco Granulated	3-12-6 (287)	3.30	3.00	12.12	12.00	5.81	6.00	----
Devco Granulated	3-12-6 (334)	3.16	3.00	12.28	12.00	*5.62	6.00	----
Devco Granulated	3-12-6 (435)	2.81	3.00	*10.60	12.00	*5.42	6.00	----
Devco Granulated	4-12-4 (436)	3.82	4.00	*10.21	12.00	3.89	4.00	----
Devco Granulated	4-12-8 (81)	4.19	4.00	12.64	12.00	8.01	8.00	----
Devco Granulated	4-12-8 (220)	4.12	4.00	12.58	12.00	*7.33	8.00	----
Devco Granulated	4-16-4 (155)	4.89	4.00	*15.54	16.00	4.42	4.00	----
Devco Granulated	5-10-5 (7)	4.95	5.00	9.94	10.00	*4.71	5.00	----
Devco Granulated	5-10-5 (223)	5.57	5.00	10.52	10.00	4.80	5.00	----
Devco Granulated	5-10-10 (154)	*4.38	5.00	*8.86	10.00	*9.61	10.00	----
Devco Granulated	5-10-10 (221)	4.83	5.00	11.04	10.00	10.13	10.00	----
Devco Granulated	5-10-10 (249)	4.81	5.00	12.44	10.00	9.60	10.00	----
Devco Granulated Ferti- lizer for the Home	5-10-5 (8)	*4.67	5.00	*9.42	10.00	*4.60	5.00	----
Devco Granulated Ferti- lizer for the Home	5-10-5 (82)	4.82	5.00	9.88	10.00	4.82	5.00	----
Devco Granulated Poteto Speciel	5-10-10 (84)	4.93	5.00	10.22	10.00	9.90	10.00	----
Old Reliable Fertilizer	2-12-6 (181)	2.04	2.00	12.20	12.00	6.26	6.00	----
Old Reliable Fertilizer	3-12-6 (180)	2.86	3.00	12.32	12.00	6.42	6.00	----
Old Reliable Fertilizer	4-12-4 (184)	3.81	4.00	12.52	12.00	4.83	4.00	----
Old Reliable Fertilizer	4-12-8 (182)	4.17	4.00	12.06	12.00	8.55	8.00	----
EASTERN STATES FARMERS' EXCHANGE INCORPORATED West Springfield, Mass.								
Eastern States	3-12-6 (110)	3.34	3.00	12.42	12.00	6.03	6.00	----
Eastern States	3-12-6 (167)	3.30	3.00	12.87	12.00	6.86	6.00	----
Eastern States	3-12-6 (399)	3.47	3.00	12.90	12.00	6.52	6.00	----
Eastern States	5-10-5 (111)	*4.62	5.00	11.26	10.00	5.62	5.00	----
Eastern States	5-10-5 (168)	4.92	5.00	11.12	10.00	5.56	5.00	----
Eastern States	5-10-5 (398)	5.15	5.00	11.86	10.00	5.64	5.00	----
Eastern States	5-10-10 (143)	4.92	5.00	10.76	10.00	10.79	10.00	----
Eastern States	5-10-10 (170)	5.30	5.00	11.08	10.00	11.22	10.00	----
Eastern States	5-10-10 (401)	5.44	5.00	10.46	10.00	10.72	10.00	----
Eastern States	5-15-15 (301)	5.09	5.00	16.26	15.00	15.45	15.00	----
Eastern States	5-15-15 (113)	5.22	5.00	*14.46	15.00	17.35	15.00	----
Eastern States	10-10-10 (171)	*9.34	10.00	11.28	10.00	10.75	10.00	----
Eastern States	5-20-10 (142)	5.30	5.00	20.30	20.00	10.42	10.00	----
Eastern States	5-20-10 (112)	5.38	5.00	20.34	20.00	11.13	10.00	----
Eastern States	8-16-16 (109)	7.82	8.00	15.96	16.00	17.84	16.00	----
Eastern States	8-16-16 (141)	8.03	8.00	16.48	16.00	17.12	16.00	----

* Deficient

TABLE III. ANALYSES OF COMPLETE FERTILIZERS—FURNISHING NITROGEN, PHOSPHORIC ACID AND POTASH

MANUFACTURER AND BRAND NAME			NITROGEN		AVAILABLE PHOSPHORIC ACID		POTASH		
			Found	Guar.	Found	Guar.	Found	Guar.	As Muirate
			P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
AMOS EBY & COMPANY Paradise, Pe.									
Eby Fertilizer	3-12-6	(217)	3.01	3.00	13.46	12.00	6.71	6.00	----
Eby Fertilizer	4-8-12	(214)	4.04	4.00	9.18	8.00	*11.67	12.00	----
Eby Fertilizer	4-12-4	(215)	4.04	4.00	13.60	12.00	3.84	4.00	----
Eby Fertilizer	5-10-10	(216)	4.83	5.00	11.08	10.00	9.80	10.00	----
FARMERS FERTILIZER WORKS Elizabethtown, Pe.									
Farmers	3-12-6	(208)	2.96	3.00	13.80	12.00	6.07	6.00	----
Farmers	3-12-6	(335)	2.84	3.00	13.52	12.00	5.80	6.00	----
Farmers	4-12-4	(207)	4.02	4.00	13.46	12.00	4.03	4.00	----
Farmers	4-12-8	(206)	*3.10	4.00	13.26	12.00	8.12	8.00	----
Farmers	5-10-5	(205)	5.01	5.00	10.56	10.00	5.29	5.00	----
Farmers	5-10-10	(204)	4.80	5.00	10.96	10.00	10.93	10.00	----
Farmers Donegel Plant Food	5-10-5	(213)	5.27	5.00	11.48	10.00	5.56	5.00	----
Farmers Special Tobacco	4-8-12	(212)	4.01	4.00	9.54	8.00	12.33	12.00	----
A. D. GRAHAM & COMPANY, INC. Somerset, Pe.									
Beever Brand	3-12-6	(423)	3.23	3.00	11.82	12.00	6.15	6.00	----
Beever Brand	4-12-4	(415)	4.18	4.00	*11.62	12.00	6.02	4.00	----
Beever Brand	4-12-4	(424)	4.66	4.00	*11.52	12.00	4.21	4.00	----
GRIFFITH & BOYD COMPANY Baltimore, Md.									
Griffith & Boyd's									
High Grade Truck Guano	4-12-8	(14)	4.33	4.00	12.32	12.00	8.88	8.00	----
Double Strength Guano	4-16-16	(418)	5.37	4.00	15.80	16.00	17.17	16.00	----
Truck Poteto Special	5-10-5	(12)	*4.36	5.00	13.26	10.00	8.73	5.00	----
Double Strength Guano	8-16-16	(419)	7.81	8.00	16.08	16.00	16.53	16.00	----
Nitro Crop Feeder	10-6-4	(420)	*9.27	10.00	6.92	6.00	4.05	4.00	----
Nitro Crop Feeder	10-6-4	(13)	9.82	10.00	6.00	6.00	4.09	4.00	----
INDEPENDENT MANUFACTURING COMPANY Philadelphia, Pe.									
Independent's Consumer	3-12-6	(52)	3.83	3.00	12.18	12.00	8.24	6.00	----
Independent's Consumer	4-12-8	(67)	4.14	4.00	12.36	12.00	8.68	8.00	----
Independent's Consumer	4-12-12	(51)	4.30	4.00	12.16	12.00	12.13	12.00	----
Independent's Consumer	5-10-5	(66)	*4.01	5.00	11.34	10.00	8.30	5.00	----
Independent's Consumer	5-10-10	(50)	*4.32	5.00	10.78	10.00	*8.37	10.00	----
Independent's Consumer	7-7-7	(65)	*5.81	7.00	8.32	7.00	8.51	7.00	----
Independent's Consumer	10-6-4	(49)	10.52	10.00	7.62	6.00	5.96	4.00	----
Independent's Standard	5-10-5	(64)	5.02	5.00	11.02	10.00	6.44	5.00	----
Independent's Standard	5-10-10	(48)	5.06	5.00	10.32	10.00	9.92	10.00	----
KOLLER FERTILIZER COMPANY York, Pa.									
Kollers Atomic Poteto Phosphate	5-10-10	(118)	5.57	5.00	10.26	10.00	10.82	10.00	----
Kollers Atomic Poteto Phosphate	5-10-10	(128)	*4.46	5.00	11.52	10.00	10.25	10.00	----
Kollers Elk Phosphate	3-12-6	(121)	3.18	3.00	12.32	12.00	6.20	6.00	----
Kollers Elk Phosphate	3-12-6	(132)	2.81	3.00	12.98	12.00	6.90	6.00	----
Kollers Keystone Poteto Phosphate	4-12-8	(117)	4.28	4.00	12.70	12.00	8.91	8.00	----
Kollers Keystone Poteto Phosphate	4-12-8	(130)	3.87	4.00	12.94	12.00	9.20	8.00	----
Kollers Pee Mixture	4-12-4	(119)	4.56	4.00	12.50	12.00	7.96	4.00	----
Kollers Phosphate	4-12-4	(115)	4.53	4.00	12.38	12.00	*3.67	4.00	----
Kollers Poteto Phosphate	4-12-12	(116)	4.49	4.00	12.60	12.00	12.29	12.00	----
Kollers Poteto Phosphate	4-12-12	(131)	4.06	4.00	12.30	12.00	*10.70	12.00	----
Kollers Orchard & Tree Food	10-6-4	(120)	10.38	10.00	6.92	6.00	4.60	4.00	----
Kollers Tobacco Special Phosphate	3-9-12	(129)	3.25	3.00	10.30	9.00	*9.65	12.00	----
LEBANON FERTILIZER WORKS, INC. Lebanon, Pe.									
Levan's	3-12-6	(377)	3.09	3.00	12.70	12.00	6.28	6.00	----
Levan's	5-10-5	(378)	5.81	5.00	10.44	10.00	5.22	5.00	----
FRED E. LORD, INC. Espy, Pe.									
Lord's	3-12-6	(365)	3.30	3.00	13.76	12.00	6.40	6.00	----
Lord's	4-12-8	(366)	4.41	4.00	13.72	12.00	*7.60	8.00	----
Lord's	4-12-12	(369)	4.14	4.00	13.36	12.00	13.50	12.00	----
Lord's	5-10-5	(367)	5.60	5.00	10.54	10.00	4.83	5.00	----
Lord's	5-10-10	(368)	5.54	5.00	11.64	10.00	9.81	10.00	----

* Deficient

TABLE III. ANALYSES OF COMPLETE FERTILIZERS—FURNISHING NITROGEN, PHOSPHORIC ACID AND POTASH

MANUFACTURER AND BRAND NAME				NITROGEN		AVAILABLE PHOSPHORIC ACID		POTASH		
				Found	Guar.	Found	Guar.	Found	Guar.	As Muirate
				P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
MILLER CHEMICAL & FERTILIZER CORP. Baltimore, Md.										
Rich Yield	3-12-6	(290)		3.16	3.00	12.52	12.00	6.82	6.00	----
ORGANIC PLANT FOOD CO. Lancaster, Pa.										
Master Farmer	3-12-6	(134)		3.56	3.00	*11.06	12.00	*4.71	6.00	----
Master Farmer	4-8-12	(136)		4.55	4.00	8.62	8.00	*9.19	12.00	----
Master Farmer	5-10-10	(133)		5.38	5.00	10.06	10.00	*7.93	10.00	----
PENNSYLVANIA FARM BUREAU COOPERATIVE ASSN. Harrisburg, Pa.										
C.F.S.	3-12-6	(39)		3.13	3.00	12.18	12.00	6.29	6.00	----
C.F.S.	3-12-6	(89)		3.13	3.00	12.40	12.00	5.84	6.00	----
C.F.S.	3-12-6	(339)		3.40	3.00	13.06	12.00	6.59	6.00	----
C.F.S.	3-12-6	(344)		3.26	3.00	12.45	12.00	6.25	6.00	----
C.F.S.	3-12-6	(338)		3.42	3.00	18.00	18.00	10.03	9.00	----
C.F.S.	3-18-9	(411)		3.40	3.00	18.50	18.00	9.81	9.00	----
C.F.S.	4-12-4	(37)		4.19	4.00	12.18	12.00	4.49	4.00	----
C.F.S.	4-12-4	(93)		4.25	4.00	12.34	12.00	4.50	4.00	----
C.F.S.	4-12-4	(342)		4.28	4.00	12.02	12.00	4.83	4.00	----
C.F.S.	4-12-4	(413)		4.29	4.00	12.80	12.00	4.29	4.00	----
C.F.S.	4-12-12	(412)		4.01	4.00	13.24	12.00	13.21	12.00	----
C.F.S.	5-10-10	(38)		5.20	5.00	10.62	10.00	10.07	10.00	----
C.F.S.	5-10-10	(90)		5.20	5.00	10.80	10.00	10.51	10.00	----
C.F.S.	5-10-10	(337)		5.21	5.00	10.38	10.00	10.10	10.00	----
C.F.S.	8-16-16	(88)		7.85	8.00	*15.18	16.00	15.92	16.00	----
C.F.S. Super Alfalfa (with Borax)	2-12-12	(91)		2.13	2.00	12.78	12.00	12.79	12.00	----
READING BONE FERTILIZER COMPANY Reading, Pa.										
Reading	3-12-6	(44)		3.30	3.00	12.90	12.00	6.37	6.00	----
Reading	4-12-4	(46)		4.01	4.00	12.86	12.00	4.26	4.00	----
Reading	4-12-8	(47)		4.14	4.00	12.22	12.00	8.82	8.00	----
ROBERT A. REICHARD, INC. Allentown, Pa.										
Reichard's Animal Base	3-12-6	(17)		3.18	3.00	11.80	12.00	6.31	6.00	----
Reichard's Animal Base	3-12-6	(257)		3.12	2.00	12.30	12.00	5.86	6.00	----
Reichard's Animal Base	3-12-6	(303)		3.13	3.00	12.66	12.00	6.60	6.00	----
Reichard's Animal Base	4-12-4	(21)		3.86	4.00	12.62	12.00	4.23	4.00	----
Reichard's Animal Base	4-12-8	(20)		3.95	4.00	12.66	12.00	8.79	8.00	----
Reichard's Animal Base	5-10-5	(22)		5.15	5.00	10.32	10.00	5.32	5.00	----
Reichard's Animal Base	5-10-5	(258)		4.80	5.00	10.40	10.00	5.44	5.00	----
Reichard's Animal Base	5-10-5	(304)		5.19	5.00	10.56	10.00	5.39	5.00	----
Reichard's Animal Base	5-10-10	(19)		5.35	5.00	*9.64	10.00	10.47	10.00	----
Reichard's Animal Base	5-10-10	(261)		5.01	5.00	10.00	10.00	10.61	10.00	----
Reichard's Animal Base	10-6-4	(18)		10.17	10.00	6.82	6.00	3.90	4.00	----
F. S. ROYSTER GUANO COMPANY Baltimore, Md.										
Royster Guano	3-12-6	(140)		3.31	3.00	12.32	12.00	6.64	6.00	----
Royster Guano	3-12-6	(200)		3.15	3.00	12.60	12.00	6.22	6.00	----
Royster Guano	3-12-6	(333)		3.22	3.00	12.28	12.00	6.60	6.00	----
Royster Guano	3-12-6	(442)		3.30	3.00	12.02	12.00	6.35	6.00	----
Royster Guano	4-8-12	(308)		4.11	4.00	8.10	8.00	12.74	12.00	----
Royster Guano	4-12-8	(199)		4.36	4.00	12.62	12.00	7.84	8.00	----
Royster Guano	5-10-5	(138)		5.14	5.00	10.10	10.00	5.34	5.00	----
Royster Guano	5-10-5	(309)		5.20	5.00	10.54	10.00	7.19	5.00	----
Royster Guano	5-10-5	(380)		5.03	5.00	10.68	10.00	5.86	5.00	----
Royster Guano	5-10-5	(443)		5.09	5.00	10.33	10.00	5.23	5.00	----
Royster Guano	5-10-10	(137)		5.41	5.00	10.62	10.00	10.51	10.00	----
Royster Guano	5-10-10	(310)		5.17	5.00	10.32	10.00	9.83	10.00	----
M. L. SHOEMAKER COMPANY DIVISION OF WILSON COMPANY, INC. Philadelphia, Pa.										
M. L. Shoemaker's										
"Swift Sure"	3-12-6	(59)		3.08	3.00	12.78	12.00	6.61	6.00	----
"Swift Sure"	5-10-5	(58)		5.24	5.00	11.02	10.00	5.47	5.00	----
"Swift Sure"	5-10-10	(74)		5.58	5.00	10.88	10.00	10.07	10.00	----
"Swift Sure"	7-7-7	(75)		7.30	7.00	8.10	7.00	7.39	7.00	----
SWACK FERTILIZER COMPANY DuBois, Pa.										
Swack's	3-12-6	(188)		3.19	3.00	13.58	12.00	*5.78	6.00	----
Swack's	3-12-6	(245)		3.25	3.00	13.32	12.00	6.26	6.00	----
Swack's	4-12-4	(186)		4.15	4.00	13.02	12.00	4.11	4.00	----
Swack's	5-10-5	(185)		5.14	5.00	11.08	10.00	5.12	5.00	----
Swack's	5-10-10	(187)		5.02	5.00	11.20	10.00	*9.51	10.00	----
SWIFT & COMPANY PLANT FOOD DIVISION Baltimore, Md.										
Blenn	3-12-6	(145)		3.20	3.00	12.06	12.00	6.32	6.00	----
Blenn	3-12-6	(241)		2.96	3.00	12.64	12.00	6.34	6.00	----
Blenn	3-12-6	(384)		3.11	3.00	12.78	12.00	6.44	6.00	----

* Deficient

TABLE III. ANALYSES OF COMPLETE FERTILIZERS—FURNISHING NITROGEN, PHOSPHORIC ACID AND POTASH

MANUFACTURER AND BRAND NAME			NITROGEN		AVAILABLE PHOSPHORIC ACID		POTASH		
			Found	Guar.	Found	Guar.	Found	Guar.	As Muirate
			P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
Brimm	5-10-10	(385)	4.90	5.00	10.62	10.00	10.54	10.00	----
Brimm	5-10-10	(240)	5.00	5.00	11.10	10.00	10.31	10.00	----
Brimm	5-10-10	(293)	*4.42	5.00	10.42	10.00	10.54	10.00	----
Swift's Red Steer	3-12-6	(96)	2.81	3.00	12.08	12.00	6.13	6.00	----
Swift's Red Steer	3-12-6	(146)	3.11	3.00	12.60	12.00	6.12	6.00	----
Swift's Red Steer	4-12-4	(97)	3.87	4.00	12.20	12.00	4.65	4.00	----
Swift's Red Steer	4-12-8	(94)	4.01	4.00	12.16	12.00	8.42	8.00	----
Swift's Red Steer	4-12-8	(144)	4.33	4.00	12.48	12.00	8.18	8.00	----
Swift's Red Steer	5-10-5	(148)	5.00	5.00	10.10	10.00	5.37	5.00	----
Swift's Red Steer	5-10-5	(239)	5.02	5.00	10.16	10.00	5.48	5.00	----
Swift's Red Steer	5-10-10	(147)	5.31	5.00	10.04	10.00	10.22	10.00	----
Swift's Red Steer	5-10-10	(238)	5.01	5.00	11.32	10.00	10.09	10.00	----
Vigoro	4-12-4	(4)	4.11	4.00	13.36	12.00	4.39	4.00	----
Vigoro	4-12-4	(243)	4.21	4.00	12.74	12.00	4.41	4.00	----
Vigoro	4-12-4	(296)	4.25	4.00	12.20	12.00	4.50	4.00	----
Vigoro	4-12-4	(331)	4.35	4.00	12.16	12.00	4.43	4.00	----
I. P. THOMAS & SON COMPANY Camden, N. J.									
I. P. Thomas	5-10-5	(329)	4.81	5.00	10.98	10.00	5.98	5.00	----
I. P. Thomas	5-10-10	(313)	5.31	5.00	11.06	10.00	10.97	10.00	----
Tip Top Fertilizer	3-12-6	(256)	3.25	3.00	12.28	12.00	6.16	6.00	----
TRENTON BONE FERTILIZER CO. Trenton, N. J.									
Trenton	5-10-5	(161)	5.50	5.00	10.28	10.00	5.00	5.00	----
Trenton	5-10-10	(162)	5.33	5.00	9.84	10.00	*9.46	10.00	----
F. W. TUNNELL & COMPANY, INC. Philadelphia, Pa.									
Tunnell's Fertilizer	3-12-6	(72)	3.24	3.00	12.46	12.00	6.40	6.00	----
Tunnell's Fertilizer	3-12-6	(151)	3.35	3.00	12.14	12.00	6.85	6.00	----
Tunnell's Fertilizer	3-12-6	(288)	3.24	3.00	12.54	12.00	7.97	6.00	----
Tunnell's Fertilizer	3-12-6	(327)	3.49	3.00	12.94	12.00	6.30	6.00	----
Tunnell's Fertilizer	4-12-4	(7)	4.31	4.00	13.12	12.00	4.38	4.00	----
Tunnell's Fertilizer	5-10-5	(71)	5.03	5.00	10.62	10.00	5.56	5.00	----
Tunnell's Fertilizer	5-10-5	(328)	4.95	5.00	10.86	10.00	5.29	5.00	----
Tunnell's Fertilizer	5-10-10	(55)	*4.60	5.00	11.34	10.00	*9.33	10.00	----
Tunnell's Fertilizer	7-7-7	(70)	*6.46	7.00	8.26	7.00	7.94	7.00	----
UNION FERTILIZER CORPORATION Pikesville, Md.									
Union	3-12-6	(226)	3.16	3.00	13.02	12.00	6.73	6.00	----
VIRGINIA-CAROLINA CHEMICAL CORP. Baltimore, Md.									
V-C Fertilizer	3-12-6	(159)	3.21	3.00	12.72	12.00	6.47	6.00	----
V-C Fertilizer	3-12-6	(197)	3.17	3.00	12.16	12.00	6.47	6.00	----
V-C Fertilizer	3-12-6	(292)	3.07	3.00	12.40	12.00	6.44	6.00	----
V-C Fertilizer	4-12-4	(158)	4.09	4.00	13.18	12.00	4.49	4.00	----
V-C Fertilizer	4-12-4	(345)	4.01	4.00	12.92	12.00	4.30	4.00	----
V-C Fertilizer	4-12-8	(156)	*3.36	4.00	13.28	12.00	*6.36	8.00	----
V-C Fertilizer	4-12-12	(297)	4.11	4.00	12.30	12.00	12.44	12.00	----
V-C Fertilizer	4-12-12	(379)	4.19	4.00	12.56	12.00	12.83	12.00	----
V-C Fertilizer	5-10-5	(157)	5.23	5.00	10.48	10.00	5.16	5.00	----
V-C Fertilizer	5-10-5	(346)	5.13	5.00	10.46	10.00	5.04	5.00	----
V-C Fertilizer	5-10-10	(160)	5.14	5.00	10.94	10.00	10.06	10.00	----
YORK STONE & SUPPLY COMPANY York, Pa.									
Cramer's York	2-12-6	(126)	3.80	2.00	11.80	12.00	*5.32	6.00	----
Cramer's York	3-12-6	(280)	3.12	3.00	12.48	12.00	6.59	6.00	----
Cramer's York	5-10-5	(282)	5.18	5.00	10.26	10.00	*4.74	5.00	----
Cramer's York	5-10-5	(125)	5.83	5.00	10.44	10.00	*4.31	5.00	----
Cramer's York	5-10-10	(124)	5.34	5.00	10.16	10.00	*8.93	10.00	----

* Deficient

TABLE IV. GROUND BONE FERTILIZERS—FURNISHING NITROGEN AND PHOSPHORIC ACID

MANUFACTURER AND BRAND NAME	NITROGEN		PHOSPHORIC ACID	
	Found	Guar.	Found	Guar.
	P. ct.	P. ct.	P. ct.	P. ct.
BAUGH & SONS COMPANY Philadelphia, Pa.				
Baugh's Rew Bone Meal (63)	4.11	3.70	20.60	20.50
GRIFFITH & BOYD COMPANY Baltimore, Md.				
Griffith & Boyd's Ground Bone Meal (421)	4.02	3.70	20.00	20.50
INDEPENDENT MANUFACTURING COMPANY Philadelphia, Pa.				
Independent's Rew Bone Meal (54)	2.44	2.47	23.60	23.00
SWACK FERTILIZER COMPANY DuBois, Pa.				
Sweck's Rew Bone Meal (190)	3.70	3.00	17.50	15.00
* Deficient				

TABLE V. SUPERPHOSPHATE AND LIME PHOSPHATE FERTILIZERS—FURNISHING PHOSPHORIC ACID

MANUFACTURER AND BRAND NAME		PHOSPHORIC ACID					
		Total		Available		Insoluble	
		Found	Guar.	Found	Guar.	Found	Guar.
		P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
THE AMERICAN AGRICULTURAL CHEMICAL CO. New York, N. Y.							
18% Normal Superphosphata	(2)			18.38	18.00		
18% Normal Superphosphata	(99)			18.84	18.00		
18% Normal Superphosphata	(165)			19.28	18.00		
18% Normal Superphosphata	(177)			18.64	18.00		
18% Normal Superphosphata	(253)			20.06	18.00		
18% Normal Superphosphata	(298)			19.98	18.00		
18% Normal Superphosphata	(325)			20.30	18.00		
18% Normal Superphosphata	(356)			19.30	18.00		
18% Normal Superphosphata	(381)			20.64	18.00		
ARMOUR FERTILIZER WORKS Baltimore, Md.							
Armour's Big Crop Superphosphate 20%	(106)			20.88	20.00		
Armour's Big Crop Superphosphate 20%	(236)			21.34	20.00		
Armour's Big Crop Superphosphate 20%	(271)			22.12	20.00		
Armour's Big Crop Superphosphate 20%	(307)			21.50	20.00		
Armour's Big Crop Superphosphate 20%	(350)			20.68	20.00		
BAUGH & SONS COMPANY Philadelphia, Pa.							
Baugh's Superphosphate 20%	(62)			21.52	20.00		
Baugh's Superphosphate 20%	(244)			21.04	20.00		
Baugh's Superphosphate 20%	(275)			21.94	20.00		
Baugh's Superphosphate 20%	(330)			21.30	20.00		
CARLISLE FERTILIZER WORKS, INC. Carlisle, Pa.							
Carlisle Superphosphate 20%	(349)			20.62	20.00		
CENTRAL CHEMICAL CORPORATION Hagerstown, Md.							
Farmrite Famous Farmphos 20%	(372)			21.20	20.00		
Farmrite Famous Farmphos 20%	(408)			20.86	20.00		
Farmrite Famous Farmphos 20%	(431)			20.78	20.00		
Farmrite Superphosphate 20%	(87)			20.06	20.00		
COOPERATIVE G.L.F. SOIL BUILDING SERVICE INCORPORATED Ithaca, N. Y.							
G.L.F. Quality Superphosphate 20%	(362)			21.66	20.00		
G.L.F. Quality Gran-Phosphate 20%	(316)			20.98	20.00		
CUMBERLAND VALLEY COOPERATIVE ASSN. Shippensburg, Pa.							
Old Reliable Superphosphate 20%	(285)			21.24	20.00		
Old Reliable Superphosphate 20%	(341)			20.44	20.00		
THE DAVISON CHEMICAL CORPORATION Baltimore, Md.							
Davison Superphosphate 20%	(289)			21.26	20.00		
Davco Granulated Superphosphate 20%	(83)			20.68	20.00		
Davco Granulated Superphosphate 20%	(183)			20.64	20.00		
Davco Granulated Superphosphate 20%	(248)			20.64	20.00		
Davco Granulated Superphosphate 20%	(422)			21.04	20.00		
EASTERN STATES FARMERS' EXCHANGE INCORPORATED West Springfield, Mass.							
Eastern States Superphosphate Granulated 20%	(169)			20.46	20.00		
AMOS EBY & COMPANY Paradise, Pa.							
Eby Superphosphate 20%	(219)			20.82	20.00		
FARMERS FERTILIZER WORKS Elizabethtown, Pa.							
Farmers Superphosphate 20%	(211)			21.82	20.00		
* Deficient							

TABLE V. SUPERPHOSPHATE AND LIME PHOSPHATE FERTILIZERS—FURNISHING PHOSPHORIC ACID

MANUFACTURER AND BRAND NAME		PHOSPHORIC ACID					
		Total		Available		Insoluble	
		Found	Guar.	Found	Guar.	Found	Guar.
		P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
A. D. GRAHAM & COMPANY, INC. Somerset, Pe.							
Beever Brand Superphosphate 20%	(416)			21.68	20.00		
GRIFFITH & BOYD COMPANY Baltimore, Md.							
Griffith & Boyd's Superphosphate 20%	(417)			20.84	20.00		
INDEPENDENT MANUFACTURING COMPANY Philadelphia, Pe.							
Independent's Superphosphate 20%	(68)			20.84	20.00		
KOLLER FERTILIZER COMPANY York, Pe.							
Kollers H.G. Superphosphate (Pulverized) 20%	(122)			21.02	20.00		
Kollers Granular Superphosphate 20%	(123)			20.62	20.00		
FRED E. LORD, INC. Espy, Pe.							
Lord's Superphosphate 20%	(371)			21.40	20.00		
MATRISON CHEMICAL CORPORATION Baltimore, Md.							
C.F.D. Superphosphate 20%	(359)			20.60	20.00		
PENNSYLVANIA FARM BUREAU COOPERATIVE ASSN. Harrisburg, Pe.							
C.F.S. Superphosphate 20%	(16)			20.68	20.00		
C.F.S. Superphosphate 20%	(92)			20.58	20.00		
C.F.S. Superphosphate 20%	(343)			21.44	20.00		
C.F.S. Superphosphate (Granulated) 20%	(40)			20.74	20.00		
F. S. ROYSTER GUANO COMPANY Baltimore, Md.							
Royster Superphosphate 20%	(139)			20.92	20.00		
Royster Superphosphate 20%	(311)			21.60	20.00		
SWACK FERTILIZER COMPANY DuBois, Pa.							
Sweck's Superphosphate 20%	(246)			21.06	20.00		
SWIFT & COMPANY PLANT FOOD DIVISION Baltimore, Md.							
Swift's Red Steer Superphosphate 20%	(247)			20.10	20.00		
Swift's Red Steer Superphosphate 20%	(295)			20.74	20.00		
I. P. THOMAS & SON COMPANY Camden, N. J.							
Superphosphate 20%	(312)			21.68	20.00		
F. W. TUNNELL COMPANY, INC. Philadelphia, Pa.							
Tunnell's Superphosphate 20%	(73)			20.08	20.00		
VIRGINIA-CAROLINA CHEMICAL CORP. Baltimore, Md.							
V-C Superphosphate 20%	(198)			21.06	20.00		
V-C Superphosphate 20%	(441)			21.04	20.00		
YORK STONE & SUPPLY COMPANY York, Pe.							
Cramer's York Superphosphate 20%	(281)			20.84	20.00		
* Deficient							

TABLE VI. ROCK AND POTASH FERTILIZERS—FURNISHING PHOSPHORIC ACID AND POTASH

MANUFACTURER AND BRAND NAME	AVAILABLE PHOSPHORIC ACID		POTASH			
	Found	Guar.	Found	Cuar.	As Muriate	
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	
THE AMERICAN AGRICULTURAL CHEMICAL CO. New York, N. Y.						
AA Quality	0-14-7 (302)	15.78	14.00	7.83	7.00	----
AA Quality	0-14-7 (355)	15.26	14.00	7.50	7.00	----
Agrico Phosphate & Potash	0-12-12 (262)	13.18	12.00	12.40	12.00	----
Agrico Phosphate & Potash	0-14-7 (254)	14.24	14.00	8.03	7.00	----
Agrico Phosphate & Potash	0-14-7 (299)	15.18	14.00	7.54	7.00	----
Agrico Phosphate & Potash	0-14-7 (383)	15.18	14.00	7.06	7.00	----
ARMOUR FERTILIZER WORKS Baltimore, Md.						
Armour's Big Crop	0-14-7 (272)	14.04	14.00	7.33	7.00	----
Armour's Big Crop	0-14-7 (231)	14.18	14.00	6.94	7.00	----
Armour's Big Crop	0-12-12 (353)	12.38	12.00	11.83	12.00	----
Armour's Big Crop	0-14-14 (149)	14.90	14.00	15.49	14.00	----
BAUGH & SONS COMPANY Philadelphia, Pa.						
Baugh's Phosphate & Potash Mixture	0-14-7 (76)	14.10	14.00	9.96	7.00	----
Baugh's Phosphate & Potash Mixture	0-14-7 (229)	14.56	14.00	8.14	7.00	----
Baugh's Phosphate & Potash Mixture	0-14-7 (273)	16.84	14.00	6.86	7.00	----
Baugh's Phosphate & Potash Mixture with Borax	0-14-7 (274)	15.40	14.00	6.98	7.00	----
CENTRAL CHEMICAL CORPORATION Hagerstown, Md.						
Farmrite Fertilizer	0-14-7 (266)	14.74	14.00	*6.61	7.00	----
Farmrite Fertilizer	0-14-7 (410)	15.72	14.00	6.40	7.00	----
Farmrite Fertilizer	0-14-7 (429)	*13.06	14.00	8.31	7.00	----
Farmrite Fertilizer	0-20-20 (430)	20.20	20.00	*19.00	20.00	----
CUMBERLAND VALLEY COOPERATIVE ASSN. Shippensburg, Pa.						
Old Reliable	0-14-7 (286)	14.26	14.00	6.80	7.00	----
EASTERN STATES FARMERS' EXCHANGE INCORPORATED West Springfield, Mass.						
Eastern States	0-19-19 (400)	19.10	19.00	*18.42	19.00	----
Eastern States	0-20-20 (397)	20.64	20.00	*18.66	20.00	----
Eastern States	0-24-12 (166)	23.82	24.00	12.47	12.00	----
AMOS EBY & COMPANY Paradise, Pa.						
Eby Fertilizer	0-14-7 (218)	15.14	14.00	7.09	7.00	----
FARMERS FERTILIZER WORKS Elizabethtown, Pa.						
Farmers	0-12-12 (209)	12.92	12.00	12.10	12.00	----
Farmers	0-14-7 (210)	14.92	14.00	6.81	7.00	----
INDEPENDENT MANUFACTURING COMPANY Philadelphia, Pa.						
Independent's Consumer	0-12-12 (53)	14.08	12.00	*10.58	12.00	----
Independent's Consumer	0-14-7 (69)	15.58	14.00	10.45	7.00	----
KOLLER FERTILIZER COMPANY York, Pa.						
Kollers Electric Phosphate	0-14-7 (114)	14.68	14.00	7.43	7.00	----
Kollers Electric Phosphate	0-14-7 (127)	15.34	12.00	*6.61	7.00	----
FRED E. LORD, INC. Espy, Pa.						
Lord's	0-14-7 (370)	14.98	14.00	8.26	7.00	----
MILLER CHEMICAL & FERTILIZER CORP. Baltimore, Md.						
Rich Yield	0-14-7 (291)	14.10	14.00	7.58	7.00	----
* Deficient						

* Deficient

TABLE VI. ROCK AND POTASH FERTILIZERS—FURNISHING PHOSPHORIC ACID AND POTASH

MANUFACTURER AND BRAND NAME	AVAILABLE PHOSPHORIC ACID		POTASH		
	Found	Guar.	Found	Guar.	As Muriate
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
ORGANIC PLANT FOOD COMPANY Lancaster, Pa.					
Master Farmer 0-14-7 (135)	14.02	14.00	7.99	7.00	----
ROBERT A. REICHARD, INC. Allentown, Pa.					
Reichard's Famous 0-14-7 (23)	14.06	14.00	7.64	7.00	----
SWIFT & COMPANY PLANT FOOD DIVISION Baltimore, Md.					
Swift's Red Steer 0-14-7 (294)	14.04	14.00	7.64	7.00	----
F. W. TUNNELL & COMPANY, INC. Philadelphia, Pa.					
Tunnell's Fertilizer 0-12-12 (56)	12.24	12.00	12.51	12.00	----
* Deficient					

TABLE VII. MISCELLANEOUS FERTILIZERS

MANUFACTURER AND BRAND NAME		NITROGEN				PHOSPHORIC ACID			
		Found		Guar.		Total		Available	
		P. ct.	P. ct.	P. ct.	P. ct.	Found	P. ct.	Found	P. ct.
THE BARRETT DIVISION ALLIED CHEMICAL & DYE CORPORATION New York City, N. Y.	(6) (224)	16.24 16.16	16.00 16.00						
Arcadian The American Nitrate of Soda Arcadian The American Nitrate of Soda									
CHILEAN NITRATE SALES CORPORATION New York, N. Y.	(15)	16.24	16.00						
Chilean Nitrate of Soda - Champion Brand									
THE SEWERAGE COMMISSION Milwaukee, Wis.	(9)	5.96	6.00					2.04	2.00
Milorganite									
SWACK FERTILIZER COMPANY DuBois, Pa.	(189)	18.85	20.50						
Swack's Sulphate of Ammonia									

* Deficient

